

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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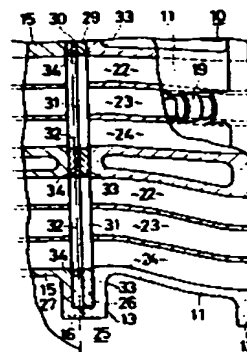
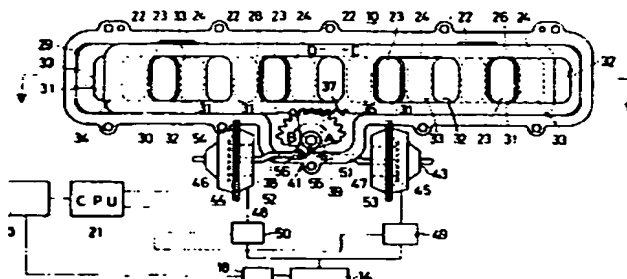
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APPLICANT : YAMAHA MOTOR CO LTD;

INVENTOR : YOSHIKAWA MASAOKI;

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TITLE : INTAKE APPARATUS FOR  
INTERNAL-COMBUSTION ENGINE



ABSTRACT : PURPOSE: To reduce the size of an intake apparatus of an internal-combustion engine, by constituting a throttle valve by a plurality of slide plates, forming an opening communicated with at least one of a plurality of intake passages in each of the slide plates, and thereby reducing the stroke of the slide plates.

CONSTITUTION: At the time of low-speed operation of an engine, control rods 51, 52 of diaphragm means 43, 44 are pulled respectively by return springs 53, 54, and a downstream-side slide plate 29 is made to slide to the right in the drawing while an upstream-side slide plate 30 is made to slide to the left, so that only the central intake passage 23 is opened through the overlap of openings 31 and 32. Accordingly, intake air is drawn into a combustion chamber efficiently at a high speed. Subsequently, when a primary throttle valve 18 is opened through operation of the throttle valve and the flow rate of intake air is increased, a solenoid valve 49 is opened by a control section 21 in response to the output of a section 20 for detecting the quantity of intake air, and the control rod 51 of the diaphragm means 43 is projected. Resultantly, the slide plate 29 is made to slide in the direction C by a sector-shaped gear 38, etc. and a third intake passage 24 is opened.

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